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Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A fusion joining device for plastic tubes that heats ~~the~~ a joint portion of plastic tubes for fusion joining the joint portion, comprising:

a fusion joining head for sandwiching said joint portion from both sides to heat the joint portion, wherein

said fusion joining head comprises a pair of members for heat conduction, a pair of clampers, and a pair of heaters;

said pair of members for heat conduction is disposed so as to be opposed to each other through said joint portion;

said pair of clampers is supported ~~such that it can~~ to be pivoted between ~~the~~ a closed position where ~~it~~ said pair of clampers sandwiches said joint portion from both sides through said pair of members for heat conduction, and ~~the~~ an open position where ~~the~~ a spacing between said pair of members for heat conduction is widened; and

said pair of heaters is made of a resistance heat generation material in ~~the shape of~~ a sheet shape, and is ~~formed so as to be~~ arranged along said pair of members for heat conduction, respectively, for heating said joint portion through the pair of members for heat conduction,

a supporting head for removably supporting the fusion joining head, and

a heating circuit for supplying power to the fusion joining head through the supporting head; wherein

said supporting head supports the pair of clampers pivotably between the closed position and the open position;

said heating circuit comprises a pair of head electrodes;

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one of said pair of head electrodes is provided on the fusion joining head;

the other of said pair of head electrodes is provided on the supporting head;

said pair of head electrodes is connected to each other when the fusion joining head is loaded onto the supporting head; and

at least one of said pair of head electrodes is energized in a direction in which the one of the pair of head electrodes is connected to the other of the pair of head electrodes.

2. (canceled)

3. (currently amended) The fusion joining device for plastic tubes of claim 1, wherein said pair of heaters ~~are~~ is connected in series with each other.

4. (currently amended) The fusion joining device for plastic tubes of claim 1, wherein said heating circuit comprises a pair of clamper electrodes;

one of said pair of clamper electrodes is provided in one of said pair of clampers, being connected to one of said pair of heaters;

the other of said pair of clamper electrodes is provided in the other of said pair of clampers, being connected to the other of said pair of heaters;

said pair of heaters is connected to ~~the~~ a power supply ~~side~~ such that a voltage is generated across the pair of heaters; and

said pair of clamper electrodes is disposed so as to be connected to each other at least when said pair of clampers is pivoted to said closed position.

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5. (currently amended) The fusion joining device for plastic tubes of claim 1, ~~wherein it comprises~~ further comprising controlling means for adjusting the power to be supplied to said fusion joining head side through said supporting head; wherein

said supporting head has a data detection section;

said fusion joining head has specific data for the fusion joining head;

said data detection section detects said specific data when said fusion joining head is loaded onto said supporting head; and

said controlling means adjusts said power on the basis of the specific data detected by said data detection section.

6. (currently amended) The fusion joining device for plastic tubes of claim 1, wherein

said ~~elamper~~ pair of clampers comprises exhaust vents; and

said exhaust vents are provided for exhausting the cooling air fed into said fusion joining head through said supporting head to the outside of said fusion joining head.

7. (currently amended) The fusion joining device for plastic tubes of claim 1, wherein

said fusion joining head comprises a pair of adiabatic members;

said pair of clampers comprises opposed surfaces and accommodation recesses;

said opposed surfaces ~~are surfaces which~~ are opposed to each other when said pair of clampers is in said closed position, and ~~where~~ are provided with said adiabatic members ~~are disposed~~;

said accommodation recesses are provided in said opposed surfaces for accommodating said heaters and said members for heat conduction;

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each of said heater heaters is formed approximately in the a shape of Ω in section, comprising and includes a central portion and both-end portions which extend from both ends of the central portion, respectively;

the central portion portions of said heater heaters ~~is~~ are situated in the inside of the accommodation ~~recess~~ recesses of said ~~elamper clampers, being formed so as to be~~ along said ~~member members~~ for heat conduction; and

The the both-end portion portions of said heater heaters ~~is~~ are extended from the accommodation ~~recess~~ recesses ~~on said elamper to~~ toward the opposed ~~surface~~ surfaces ~~side of said elamper, being disposed so as to be~~ along said adiabatic ~~member members~~.